

KIC 007289162

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
007289162-01	OBS	2539.01	5.266506	131.687546	98.6	2.813	13.2	14.3	1.06	6204	1.90	421.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007289162-01	OBS	FP	0.00	0	0	1	1	CENT_RESOLVED_OFFSET—EPHEM_MATCH

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007289162-01

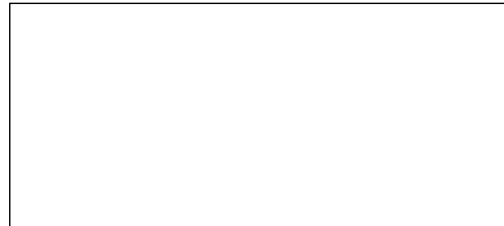
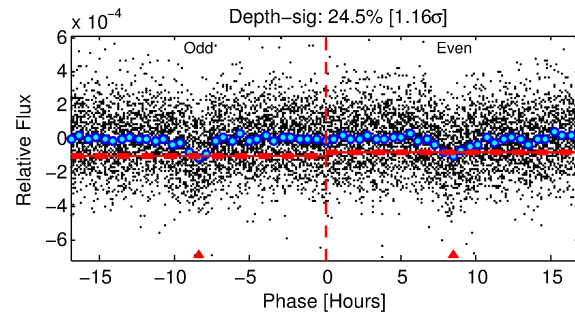
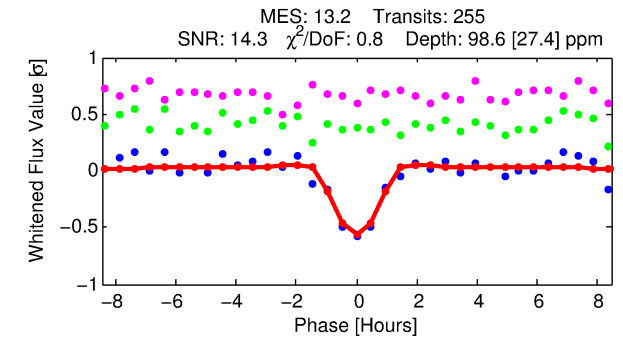
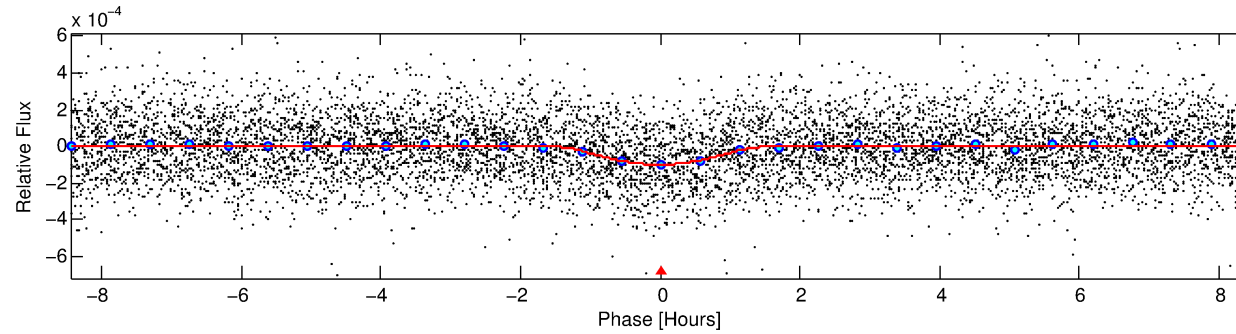
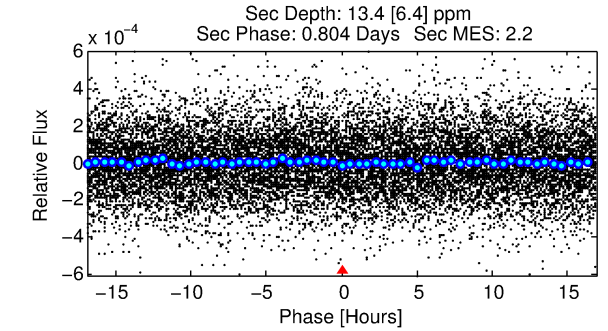
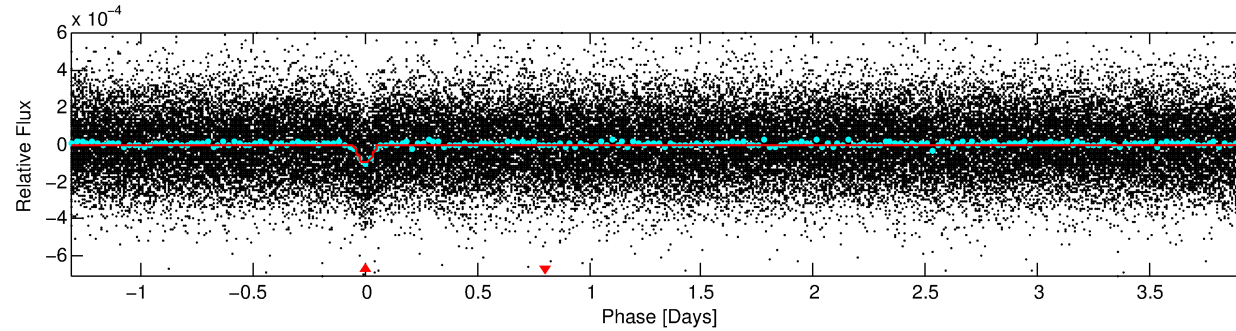
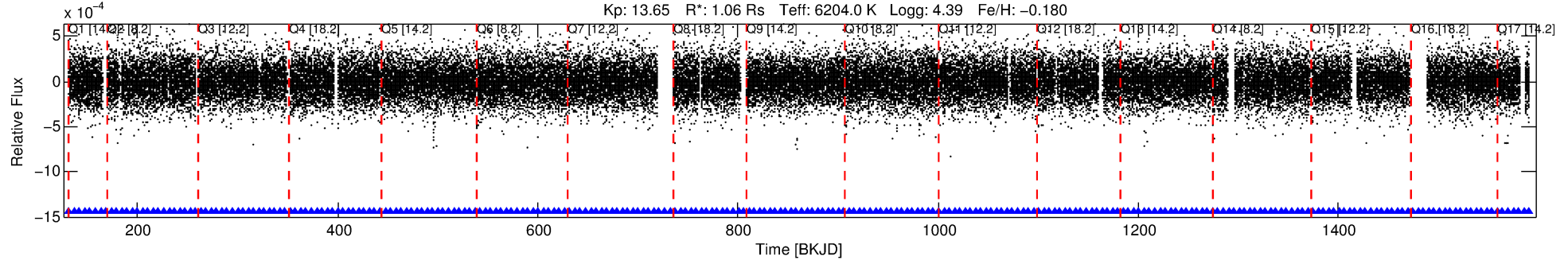
TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
007289162-01	7289162	399.01	7289157	1:1	16.8	-3	-3	12.95	13.65	585.23	Direct-PRF	0	1.00	0.64

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 7289162 Candidate: 1 of 1 Period: 5.267 d
KOI: K02539.01 Corr: 0.844

Kp: 13.65 R*: 1.06 Rs Teff: 6204.0 K Logg: 4.39 Fe/H: -0.180



DV Fit Results:

Period = 5.26651 [0.00003] d
Epoch = 131.6875 [0.0041] BKJD
Rp/R* = 0.0163 [0.0268]
a/R* = 3.05 [1.54]
b = 1.00 [0.05]
Seff = 421.81 [172.30]
Teq = 1156 [118] K
Rp = 1.90 [3.18] Re
a = 0.0597 [0.0159] AU
Ag = 7.30 [24.45] [0.26σ]
Teffp = 2937 [2444] K [0.73σ]

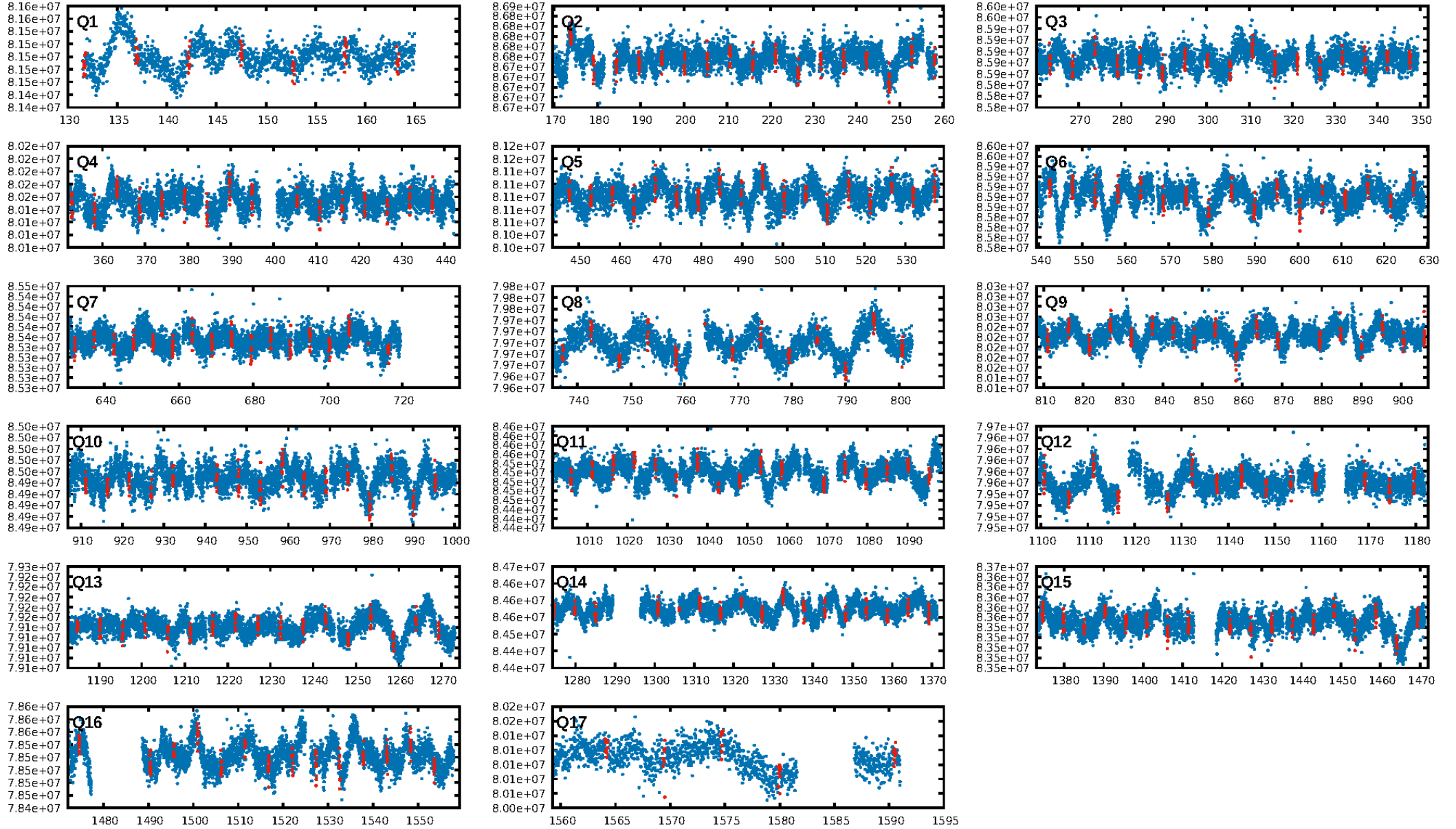
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.53e-38
RollingBand-fgt: 1.00 [243/243]
GhostDiagnostic-chr: -0.3771
Centroid-sig: 0.0%
Centroid-so: 61.487 arcsec [80.81σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [17/17]

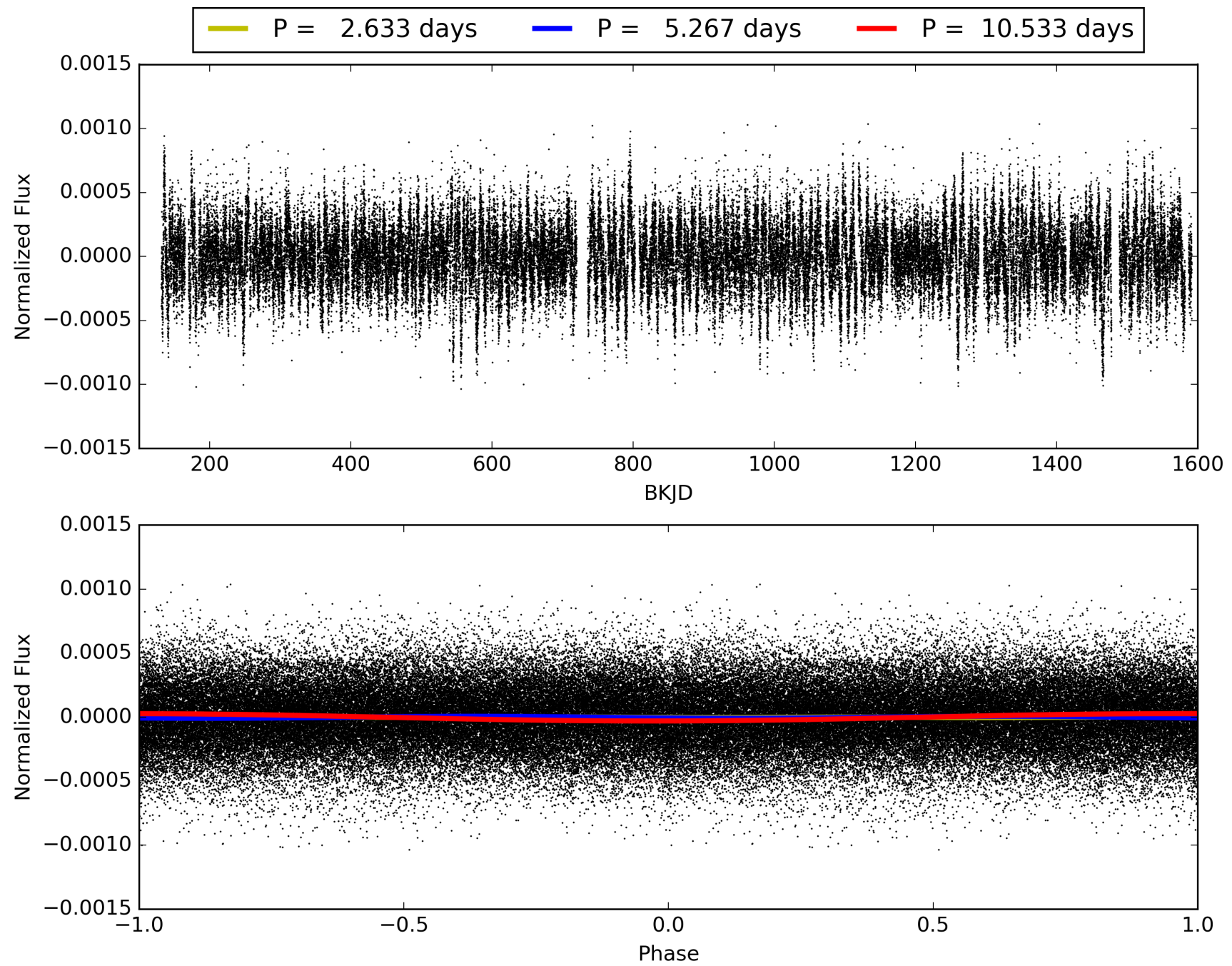
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 04:58:52 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 007289162-01, PDC Light Curves

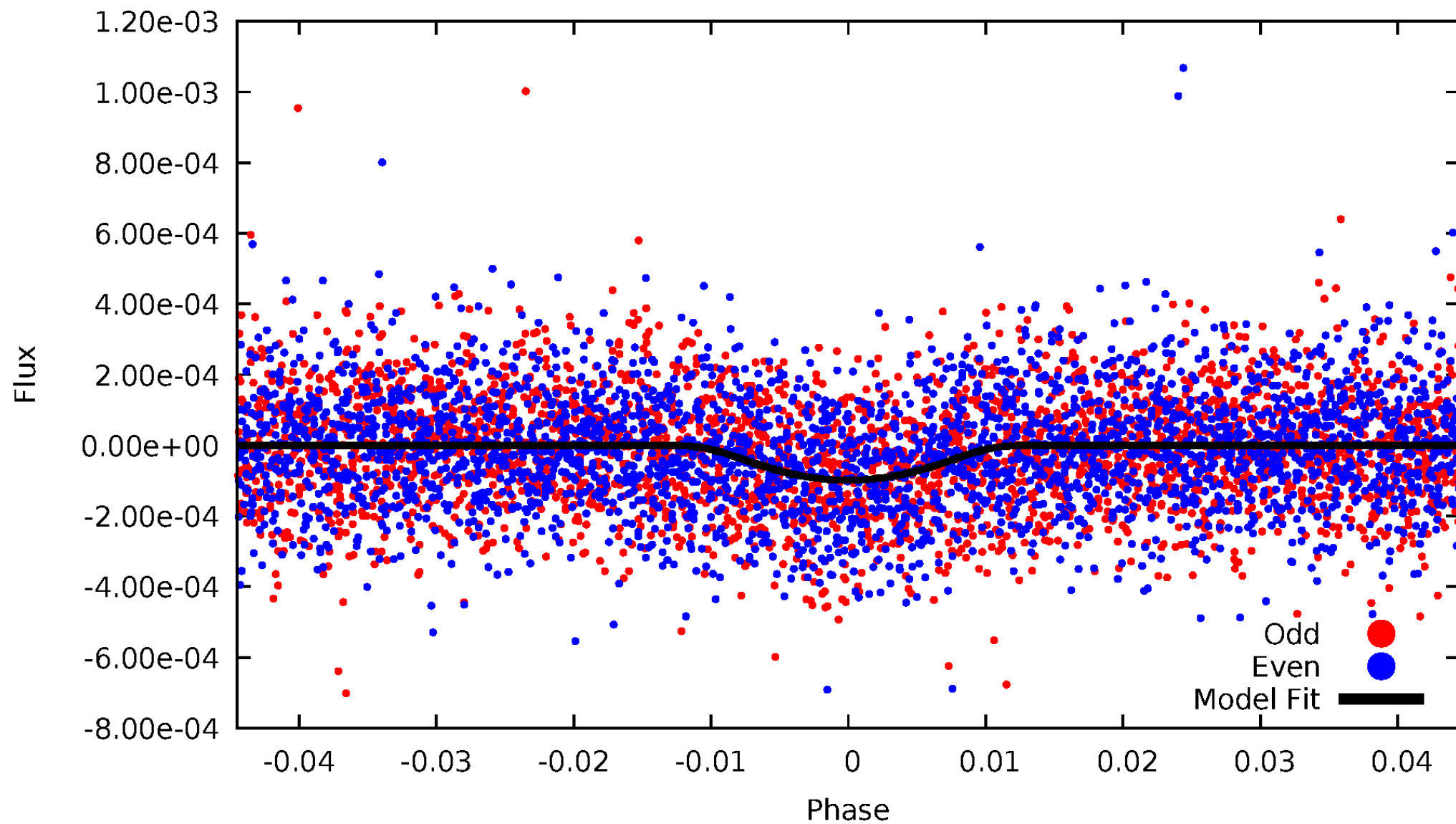


TCE 007289162-01



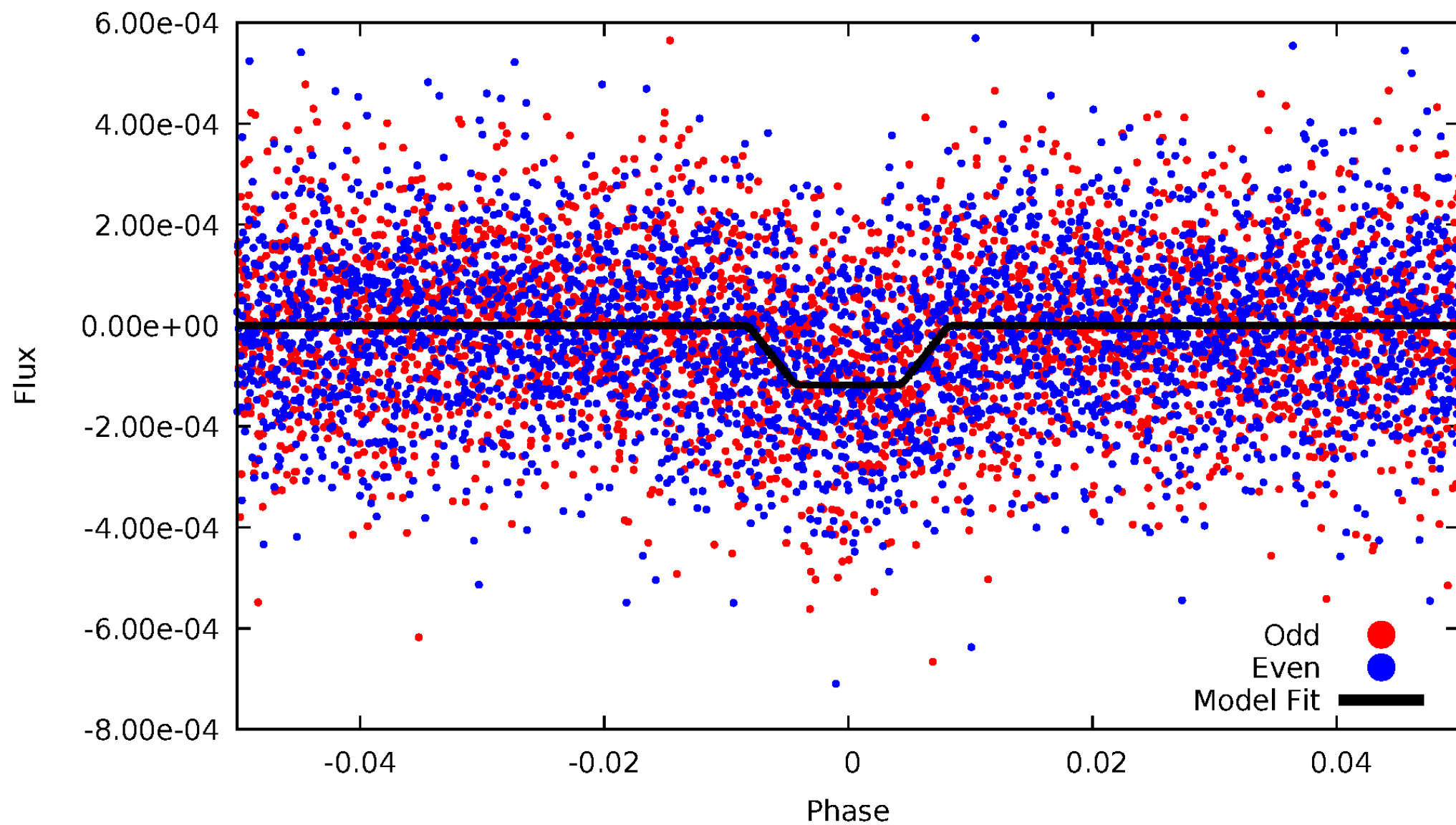
DV Odd/Even

TCE 007289162-01



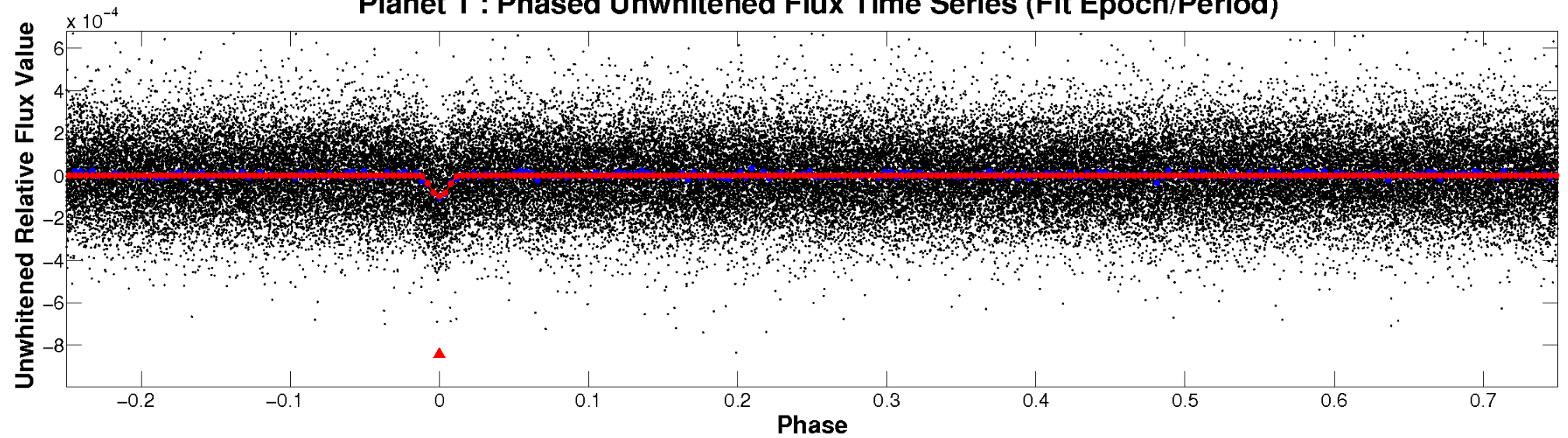
ALT Odd/Even

TCE 007289162-01

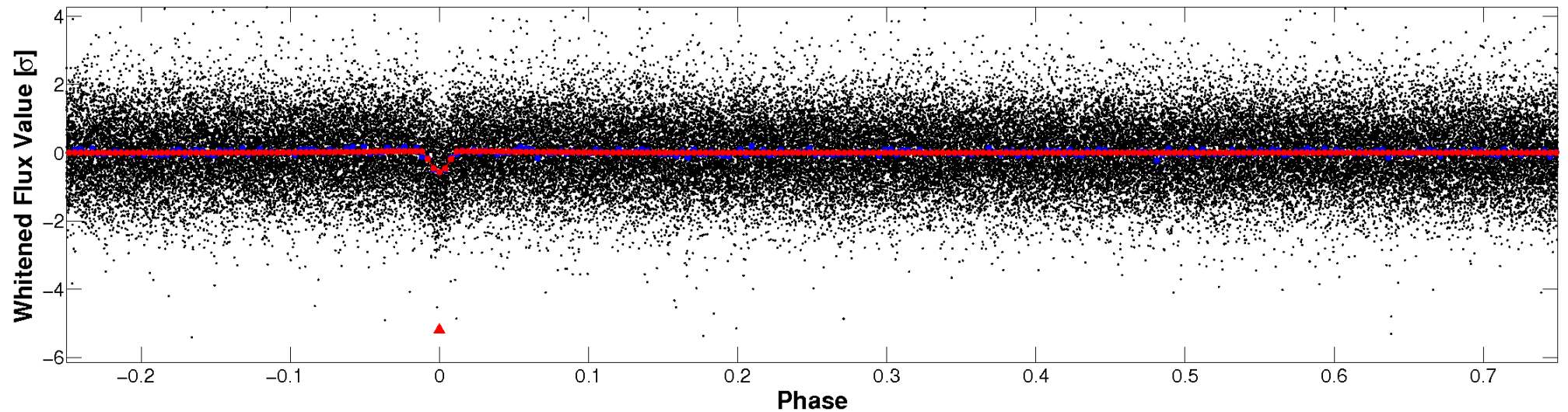


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

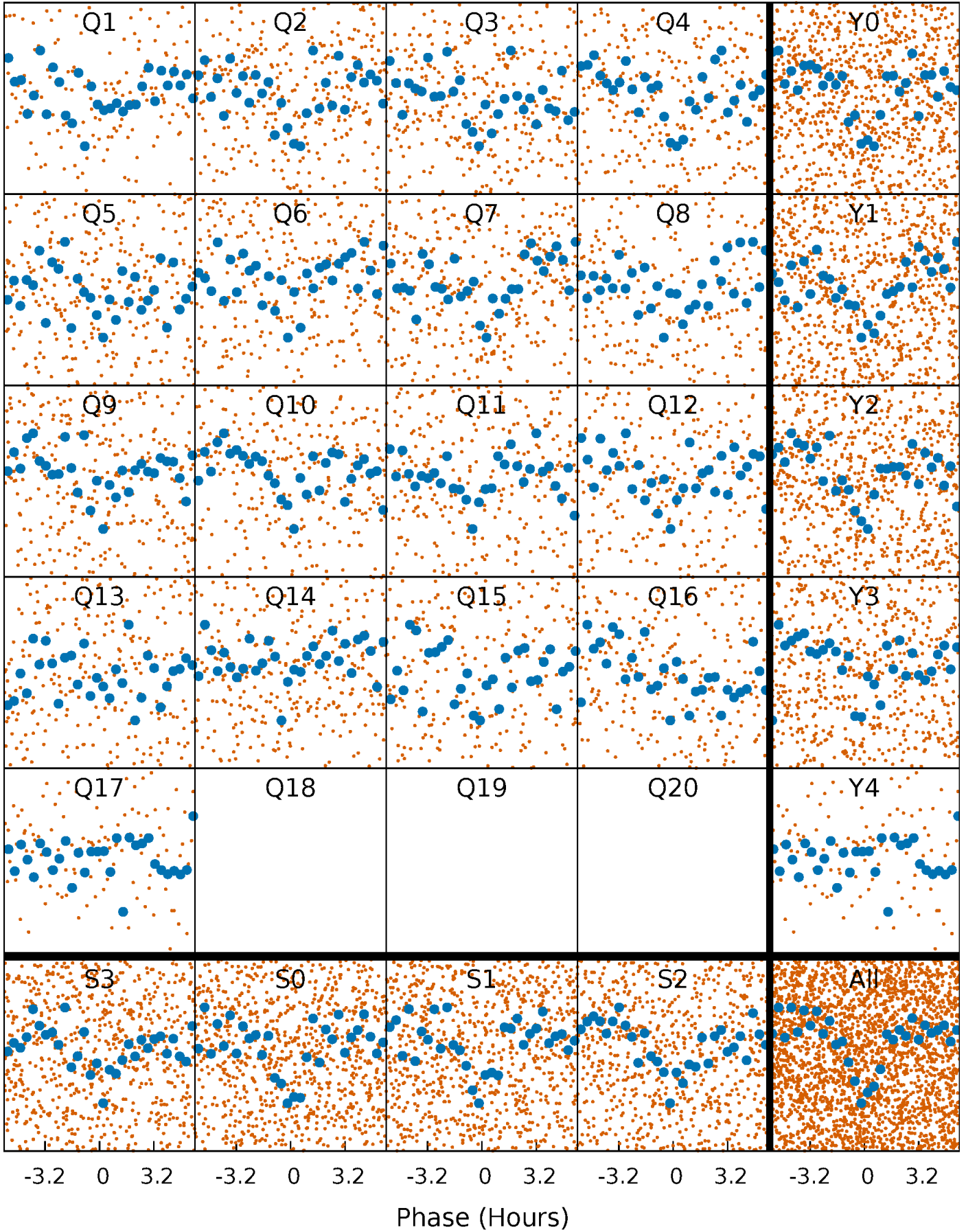


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



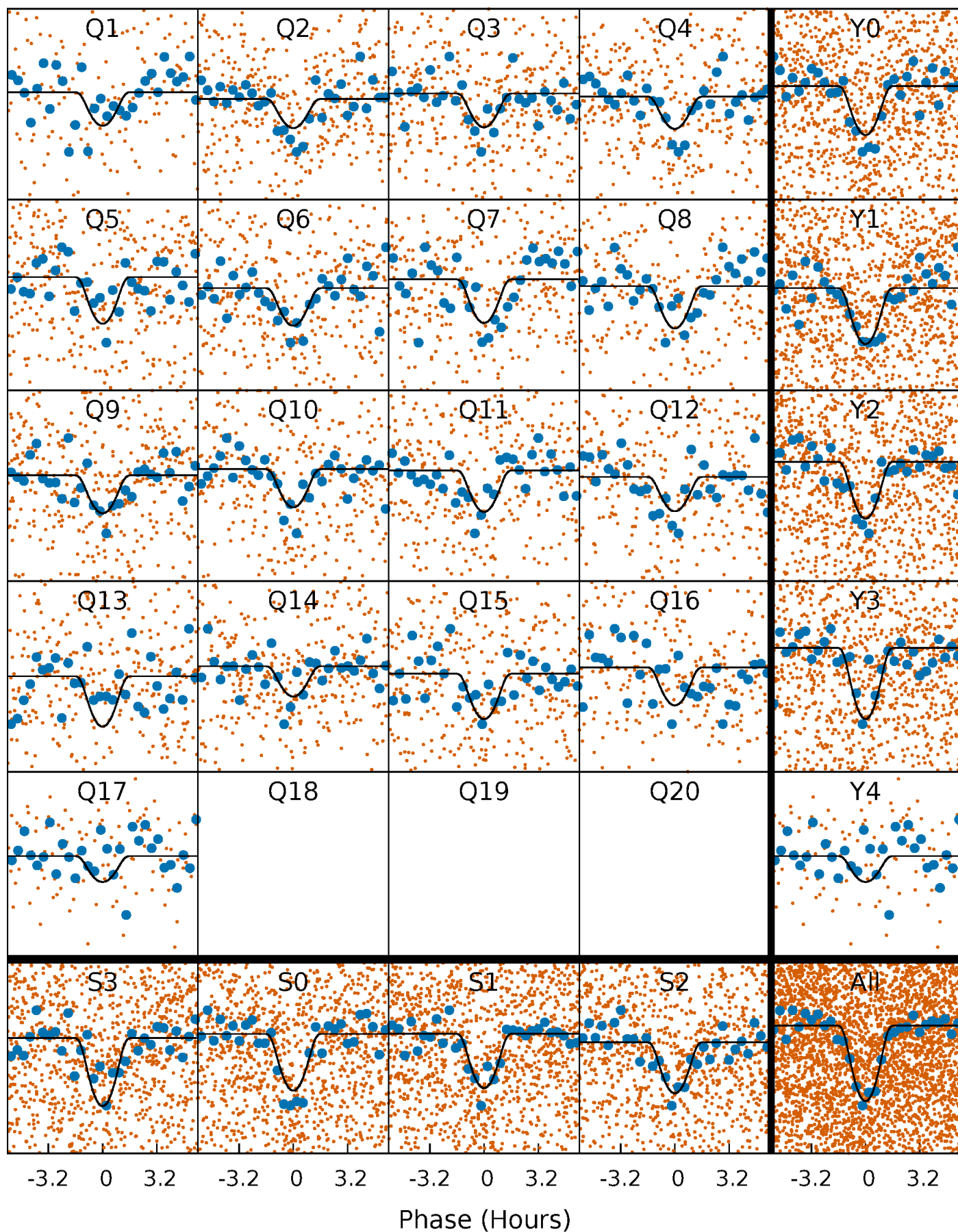
PDC Quarter-Phased Transit Curves

TCE 007289162-01 P= 5.266506 Days $T_0=131.687546$ (BKJD)



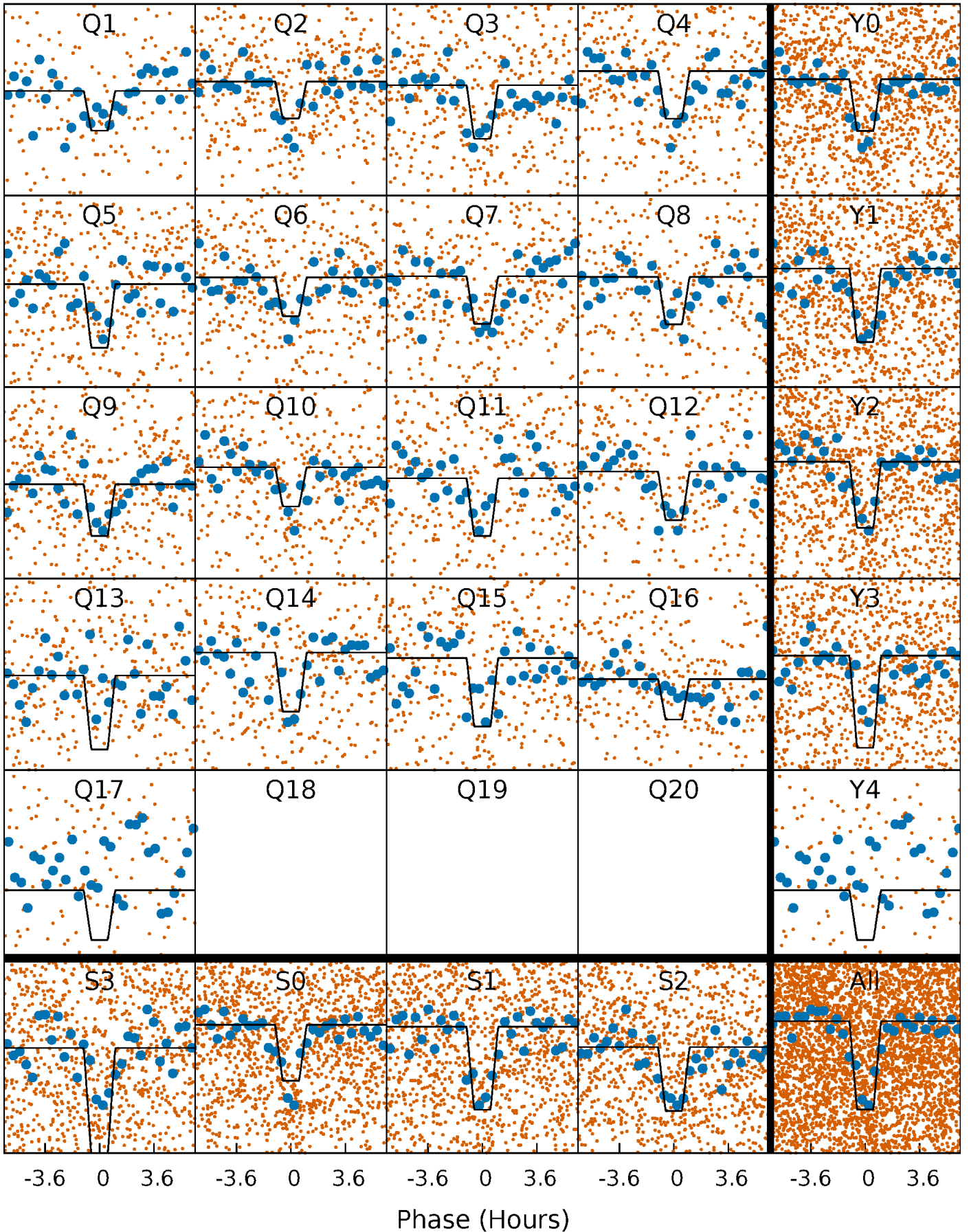
DV Quarter-Phased Transit Curves

TCE 007289162-01 P= 5.266506 Days $T_0=131.687546$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

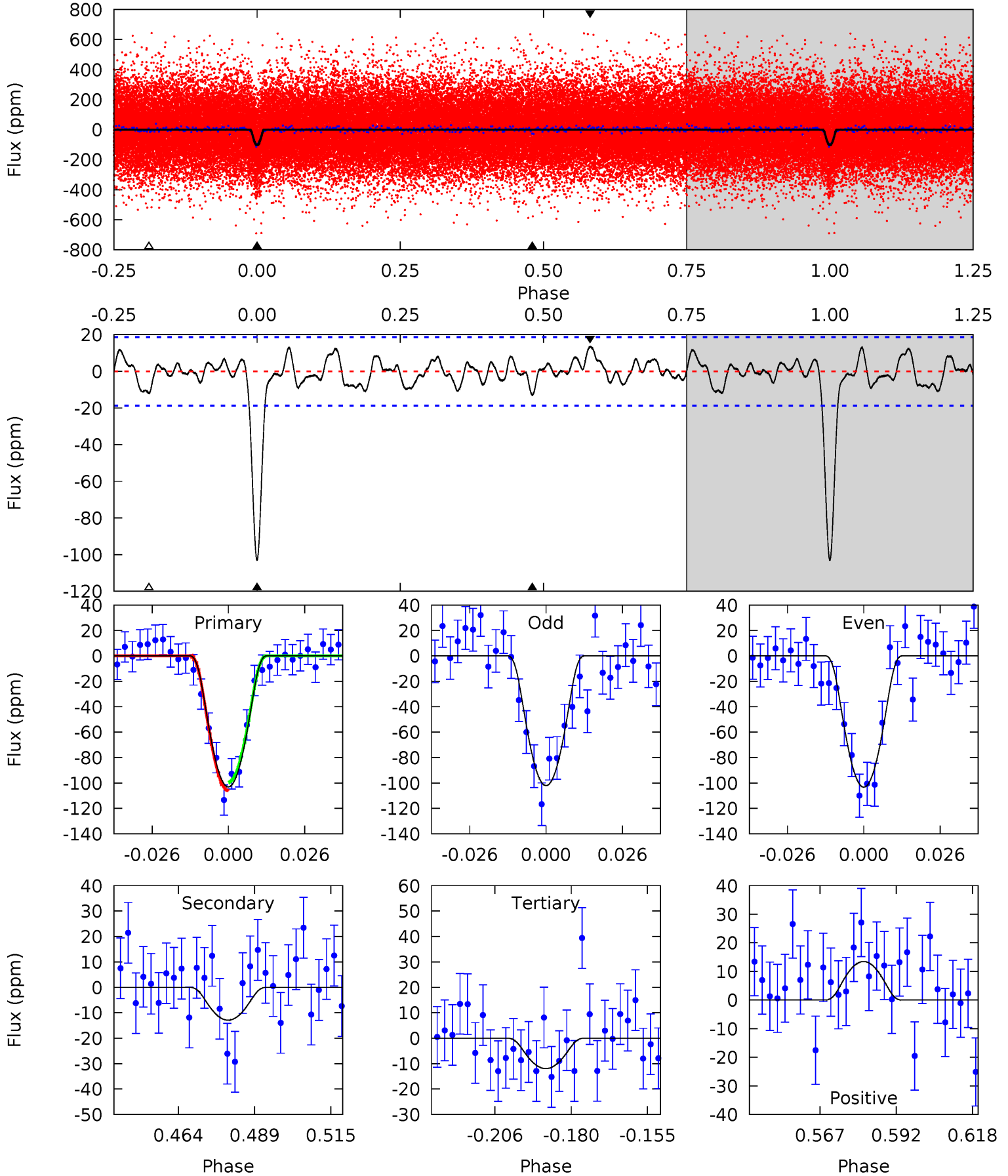
TCE 007289162-01 P= 5.266409 Days $T_0=131.698320$ (BKJD)



DV Model-Shift Uniqueness Test

007289162-01, P = 5.266506 Days, E = 126.421040 Days

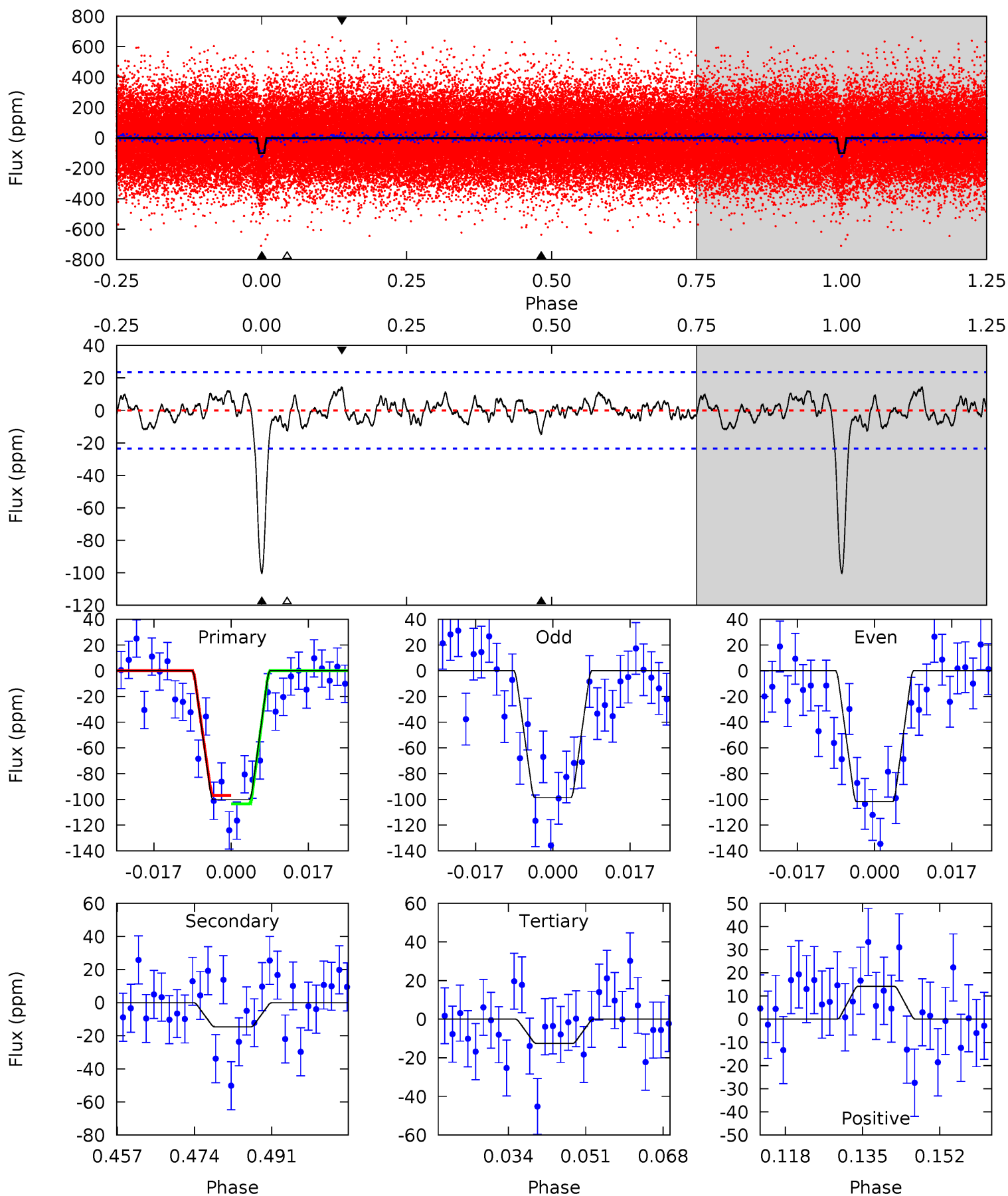
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.7	3.34	3.09	3.49	4.84	2.23	1.41	23.6	23.2	0.25	-0.14	0.16	0.97	0.12	0.86



Alt Model-Shift Uniqueness Test

007289162-01, P = 5.266409 Days, E = 126.431911 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.0	3.07	2.63	2.97	4.92	2.39	1.10	18.4	18.0	0.44	0.10	0.33	1.00	0.12	0.68



Stellar Parameters For KIC 007289162

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6204^{+168}_{-206}	$4.394^{+0.090}_{-0.210}$	$-0.180^{+0.250}_{-0.300}$	$1.065^{+0.340}_{-0.121}$	$1.021^{+0.173}_{-0.115}$	$1.190^{+0.447}_{-0.619}$
	+3%/-3%	+2%/-5%	+139%/-167%	+32%/-11%	+17%/-11%	+38%/-52%
Source	PHO1	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007289162-01 / KOI 2539.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-13 ± 4	$3.13^{+2.82}_{-2.08}$	1632^{+118}_{-86}	2916^{+1303}_{-594}	$2.584^{+19.118}_{-1.917}$
Alt.	-15 ± 5	$2.74^{+2.72}_{-1.82}$	1637^{+127}_{-90}	3090^{+1451}_{-641}	$3.638^{+28.371}_{-2.783}$

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming A=0.3)

A_{obs} = Observed Albedo (Assuming T=0)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

DV Centroid Data

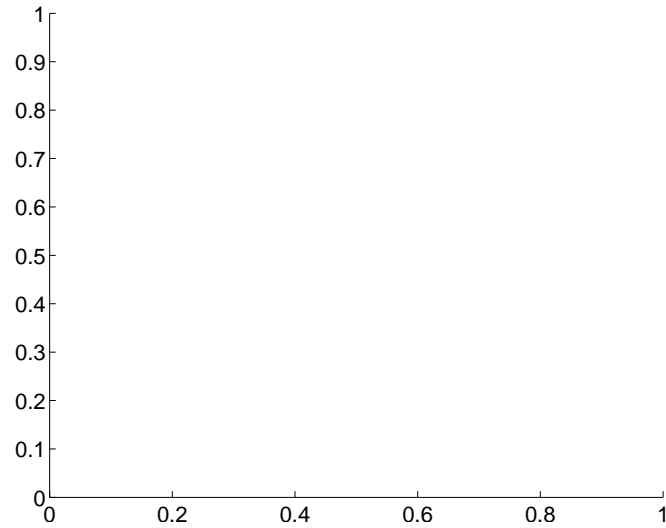
Supplemental centroid analysis for 007289162-01. Kepler magnitude: 13.65. Transit SNR 14.29

There are 0 quarters with good PRF difference image offsets

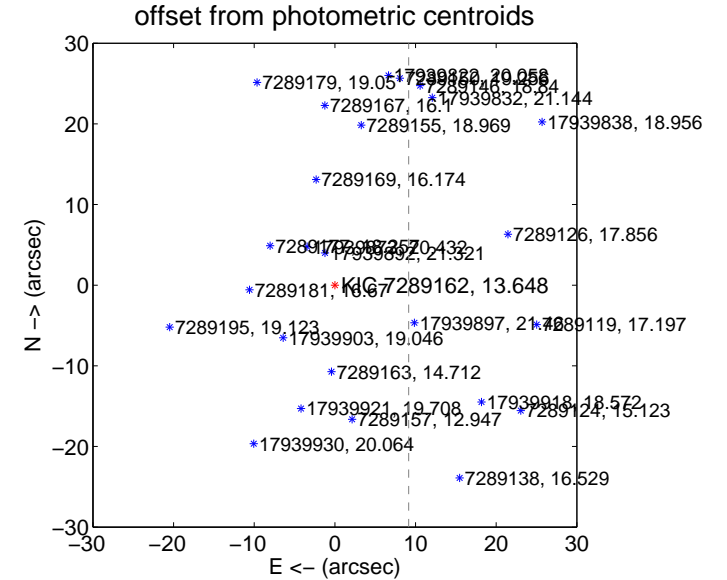
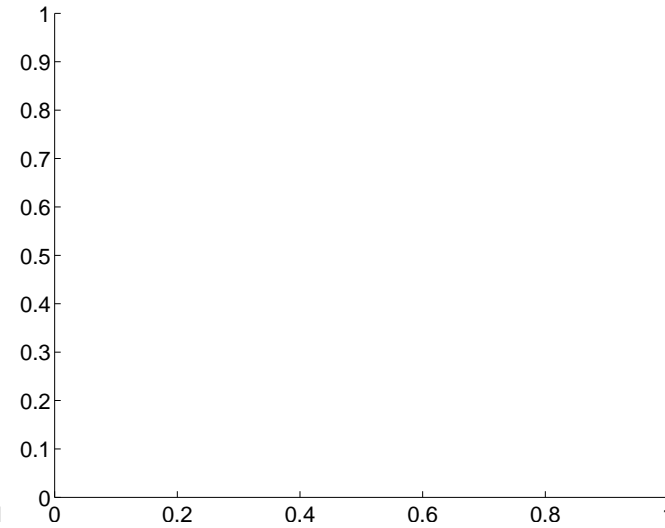
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	61.49 ± 0.76	80.81	-9.15 ± 0.82	-60.80 ± 0.76

There is no PRF-fit offset from OOT-fit

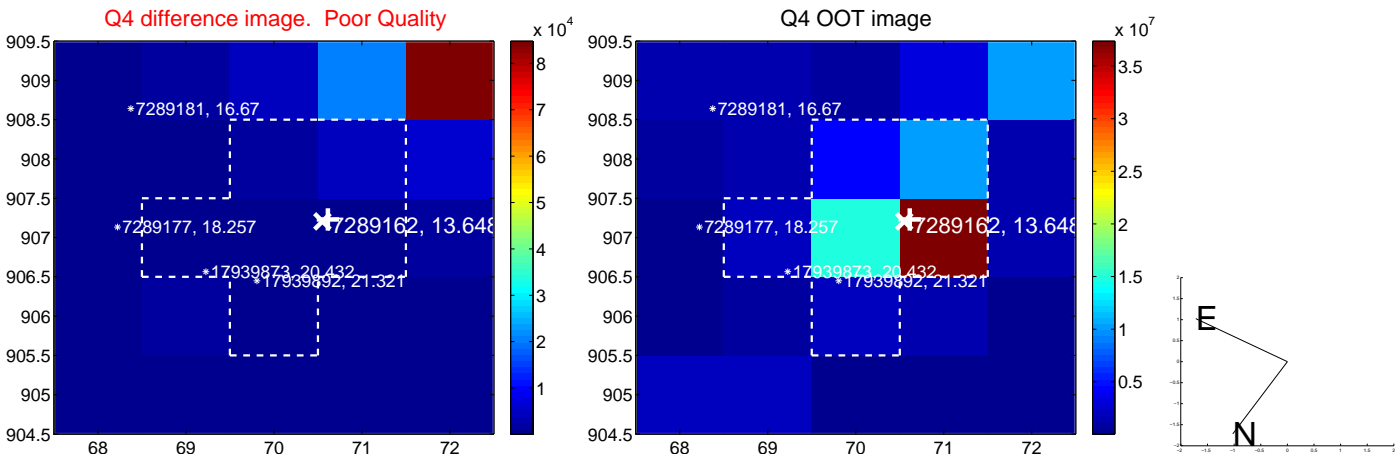
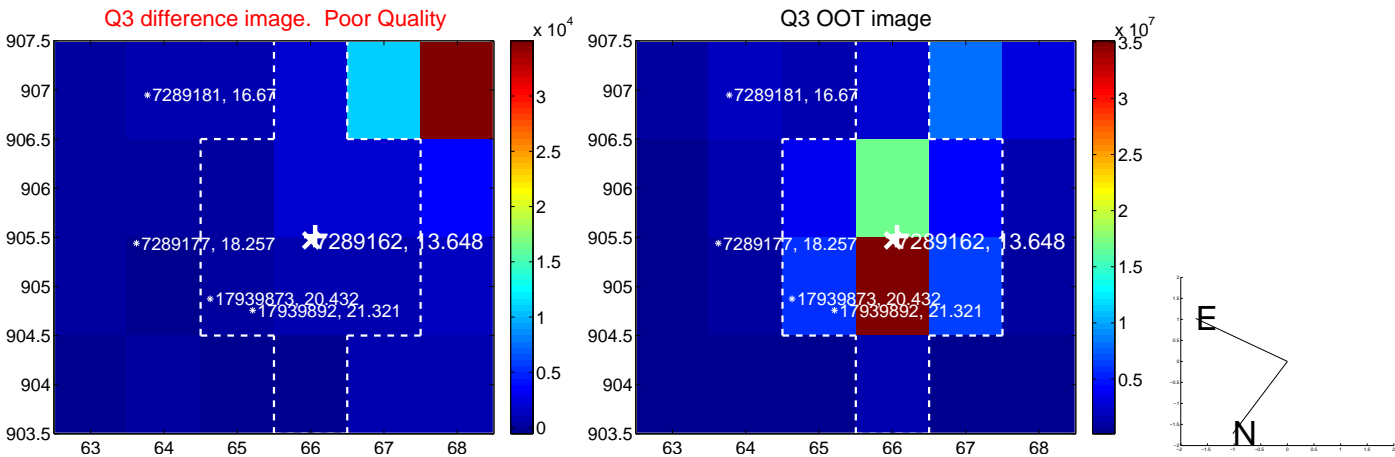
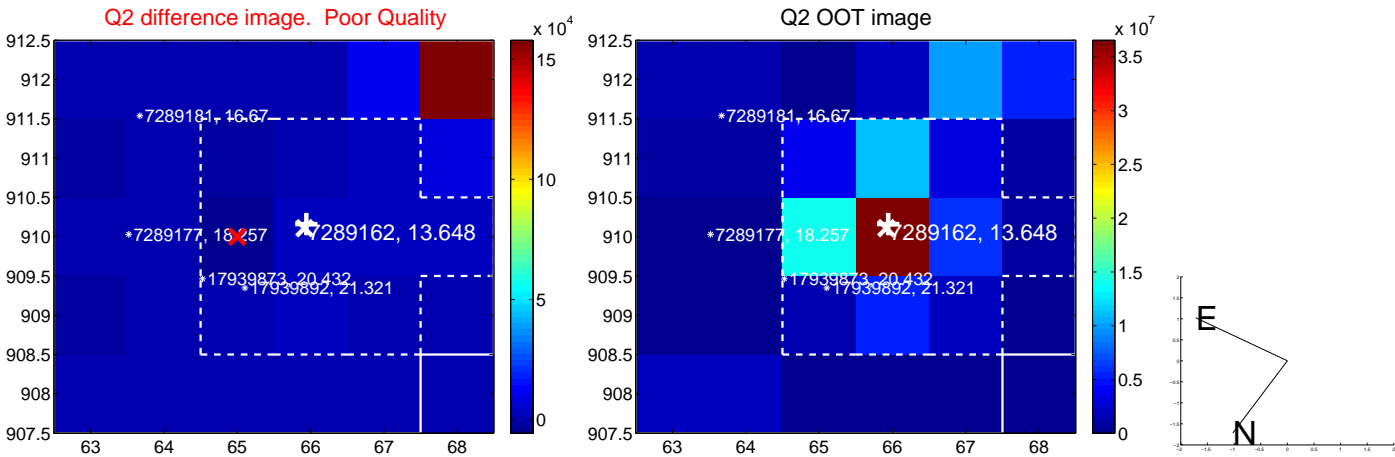
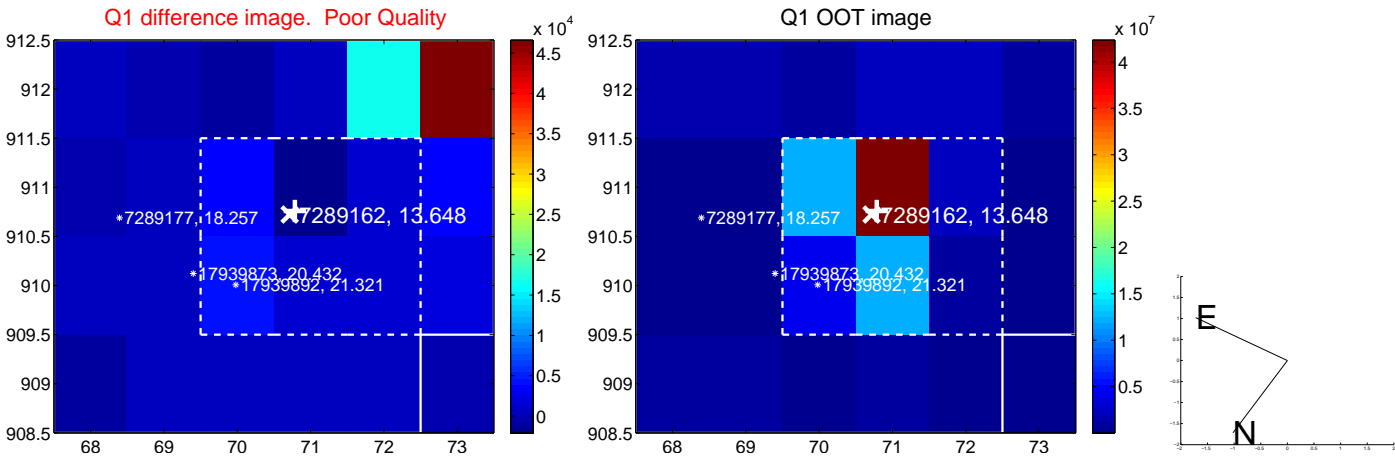


There is no PRF-fit offset from KIC

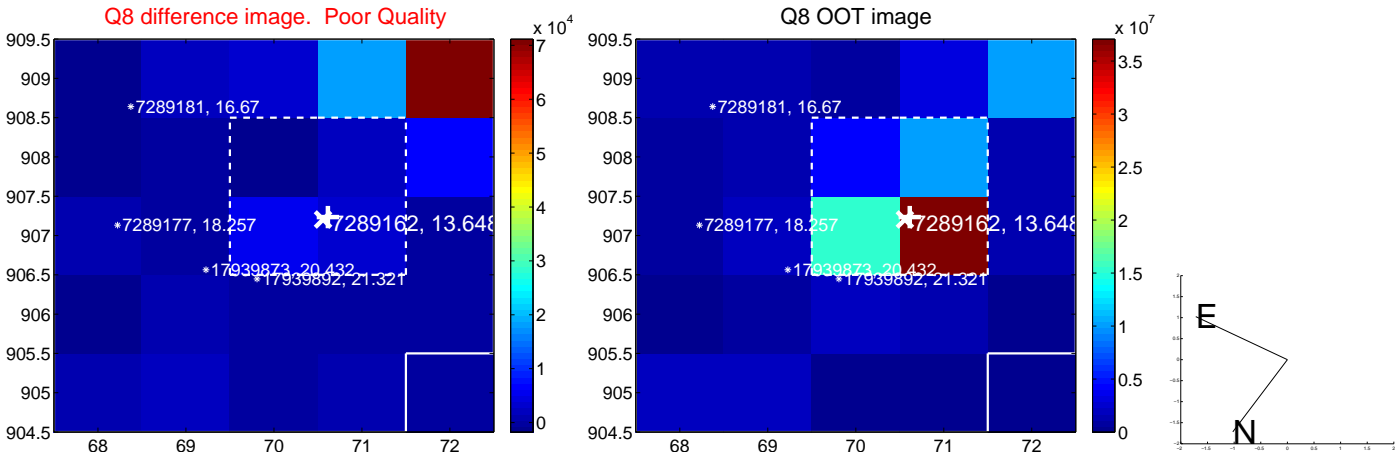
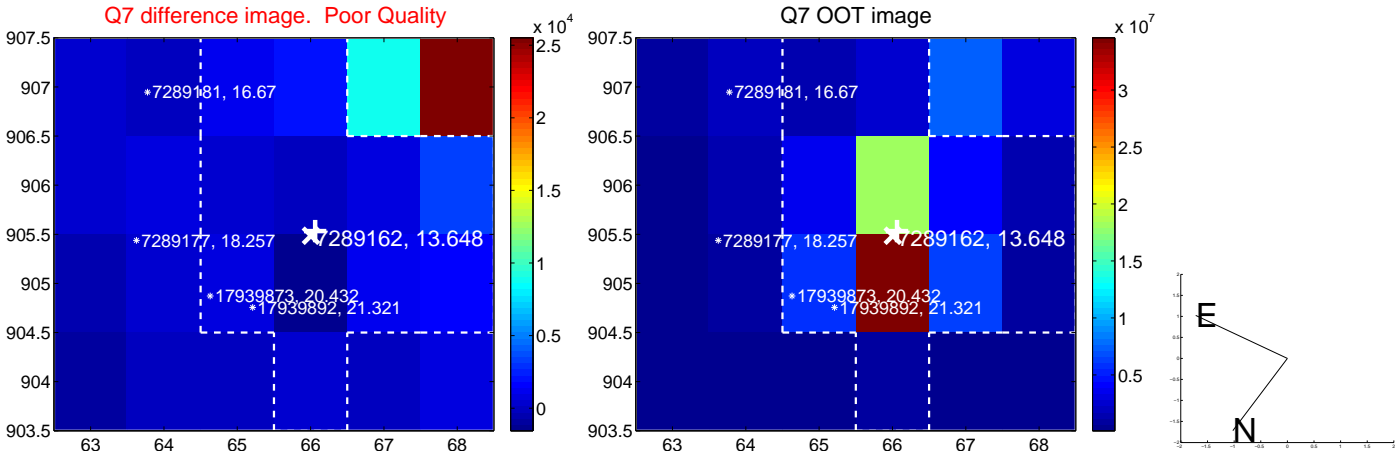
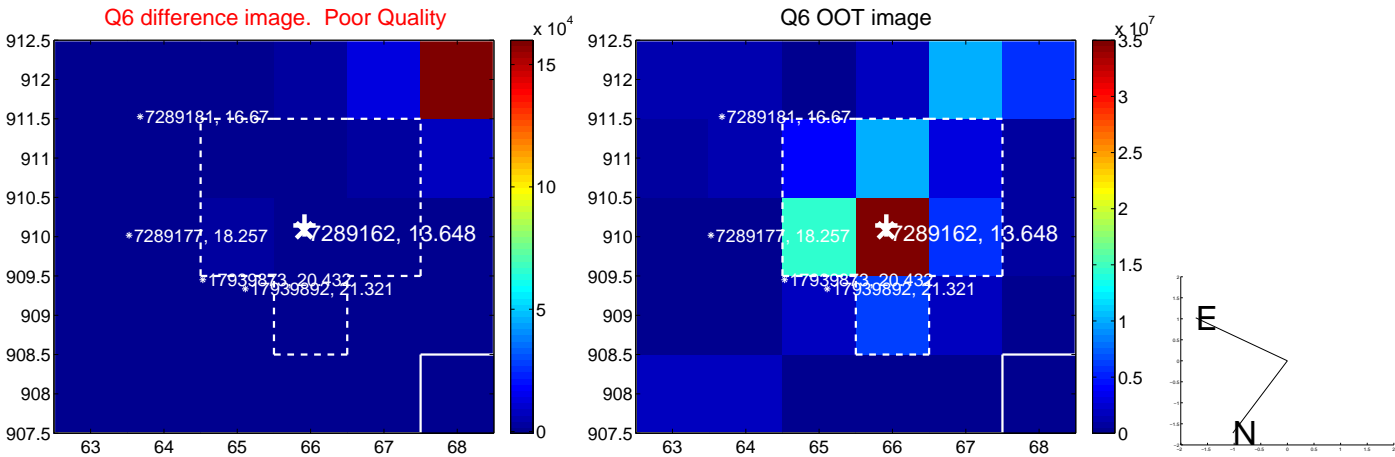
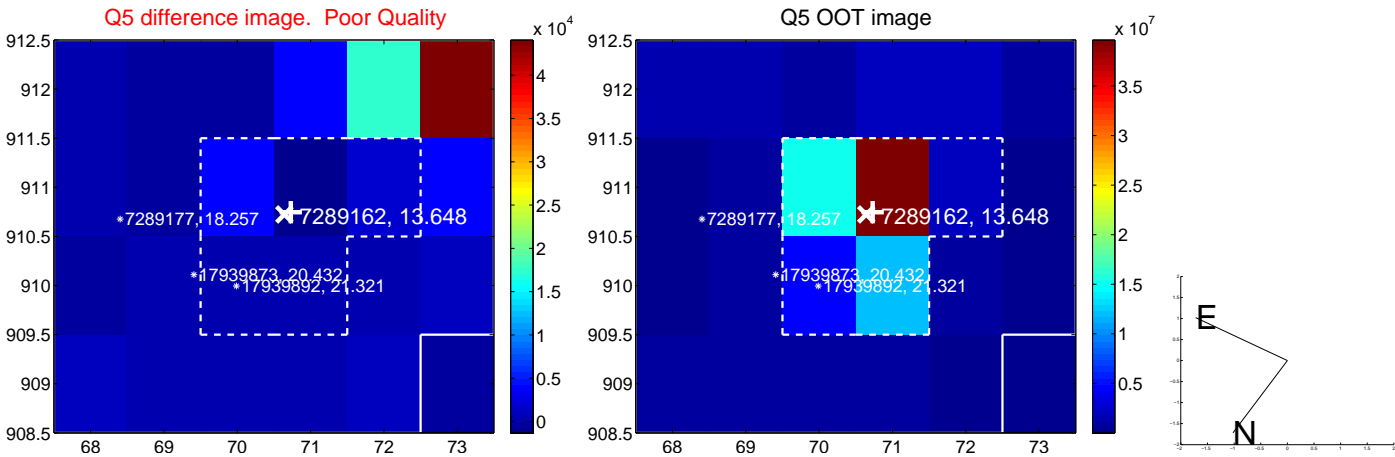


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

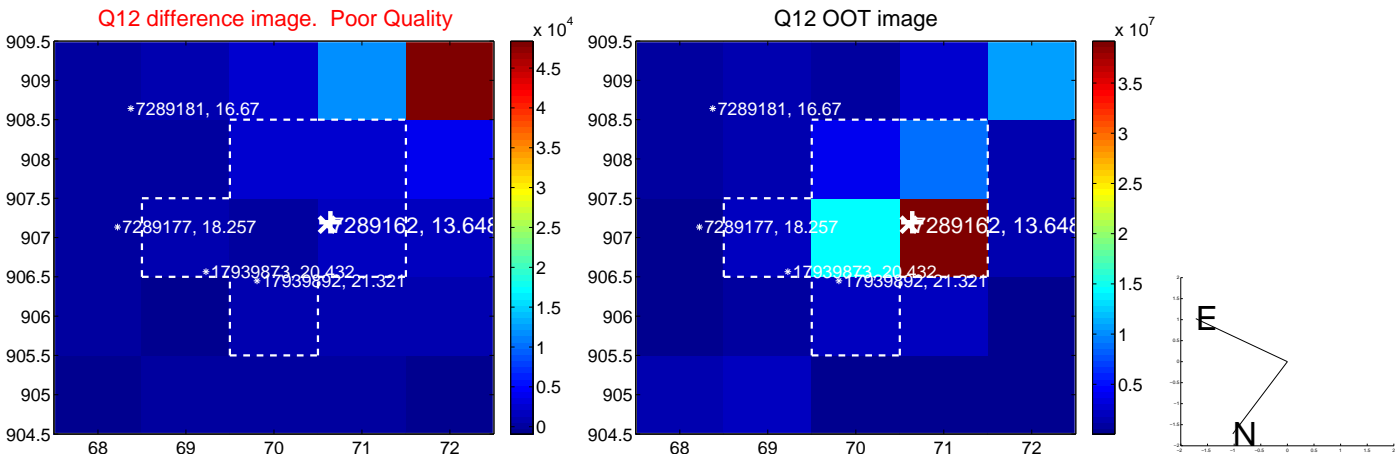
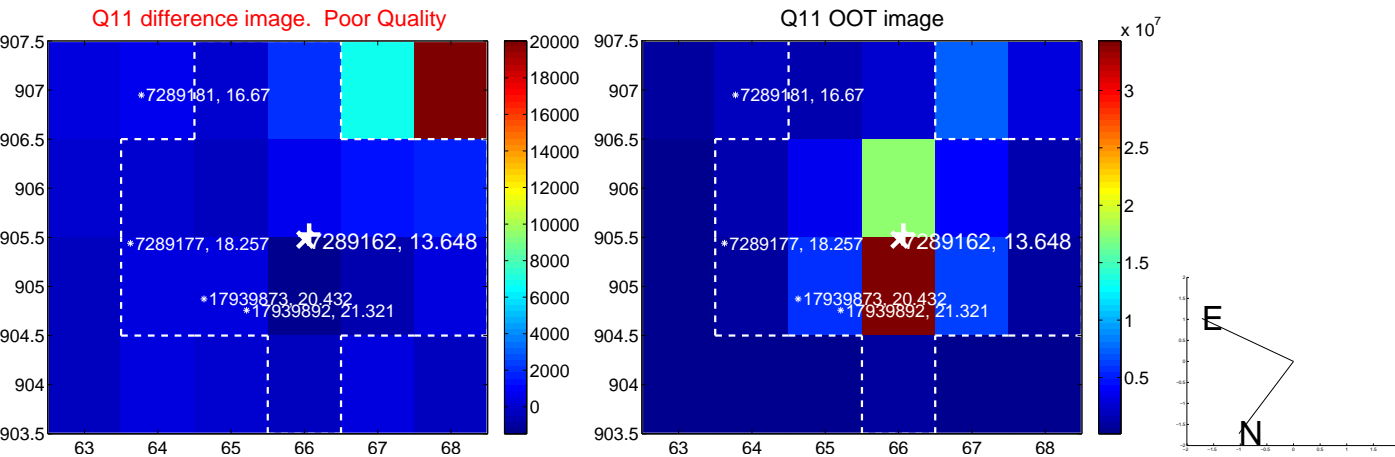
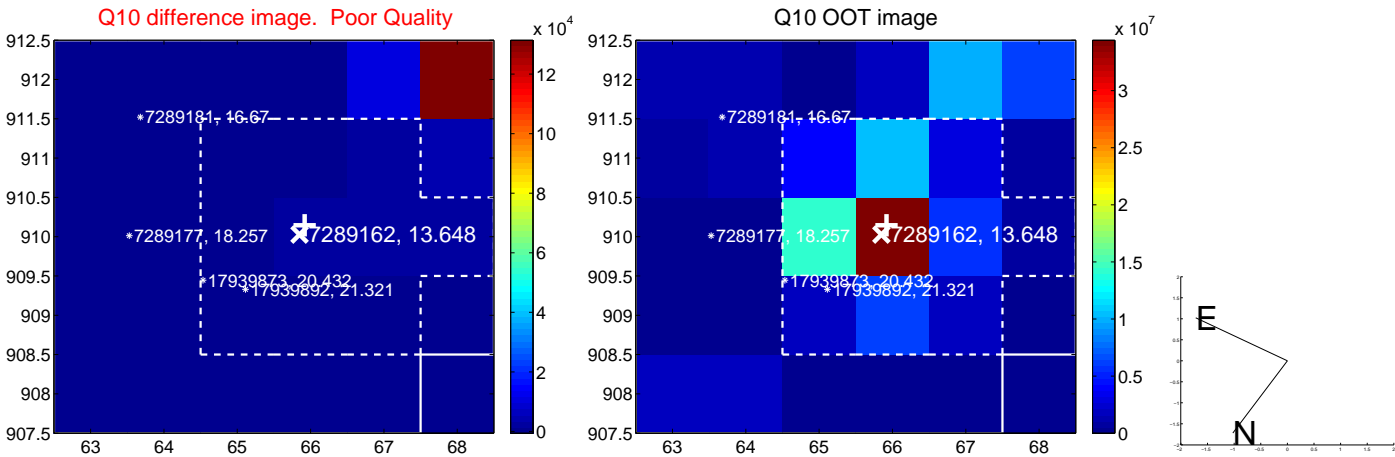
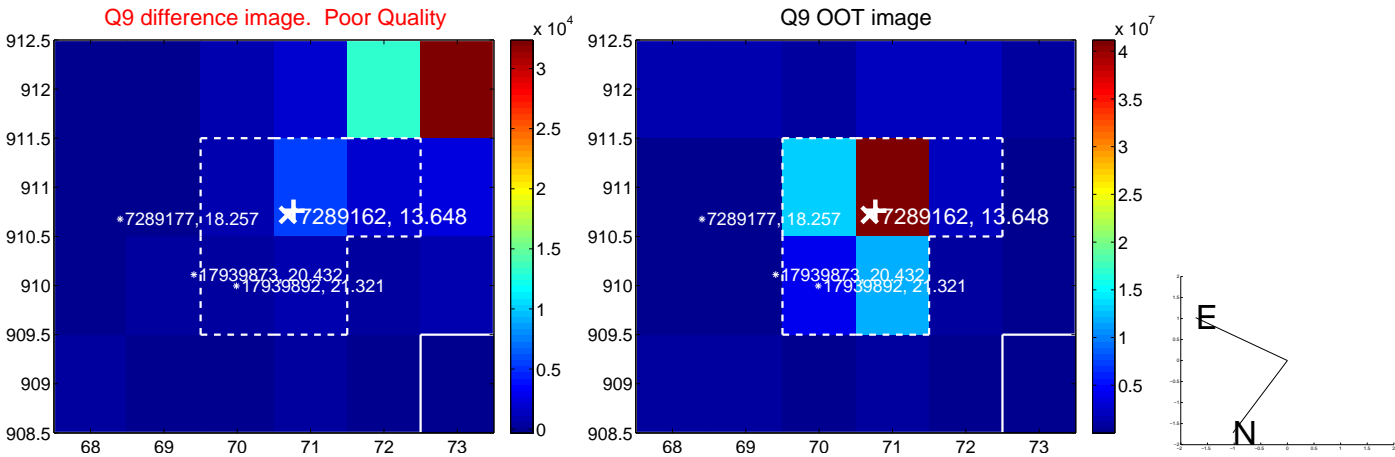
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



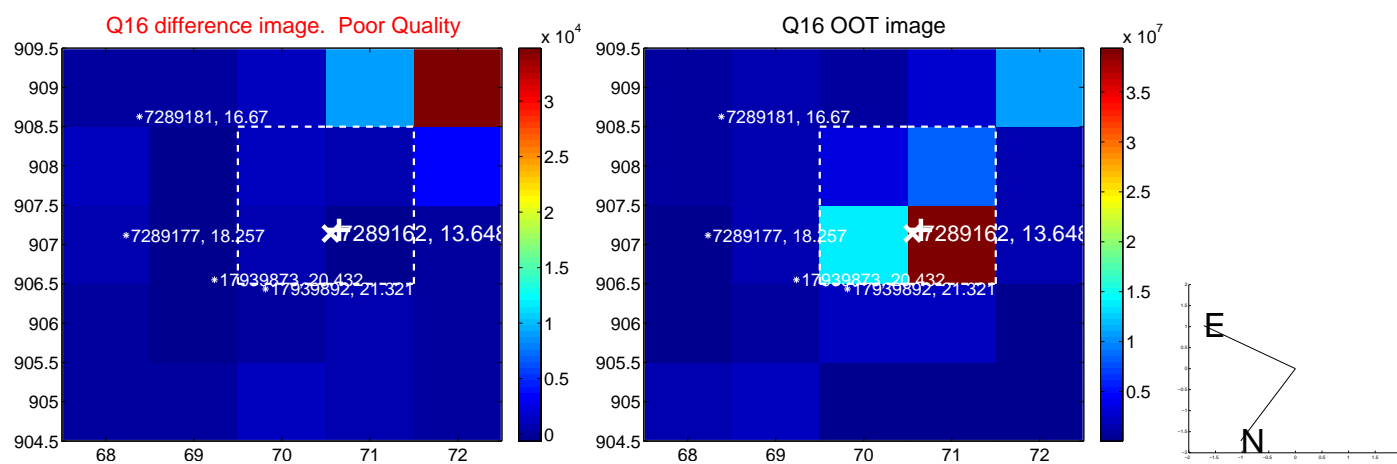
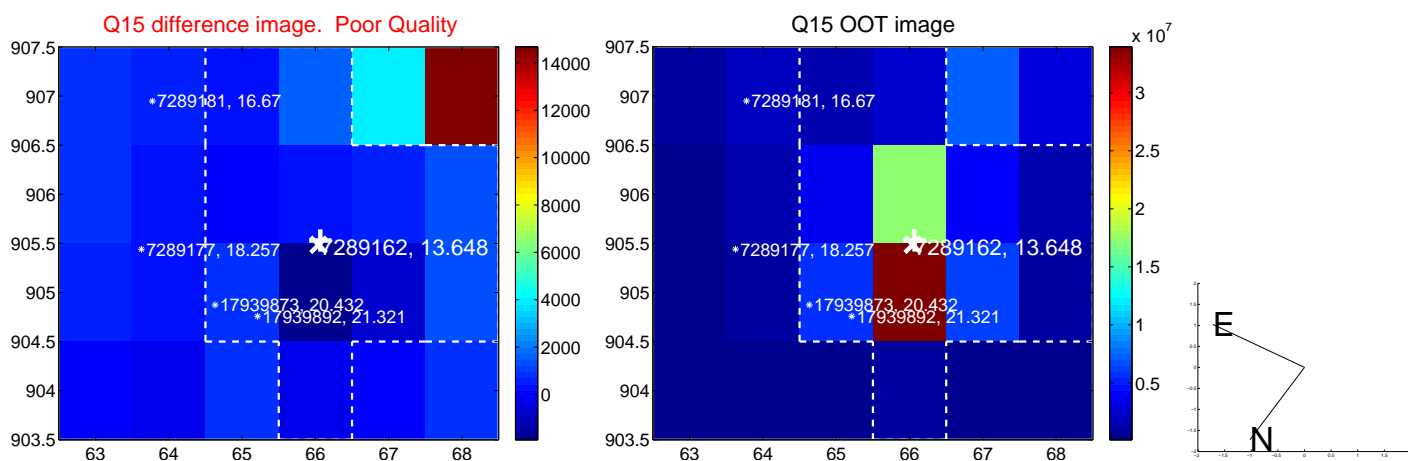
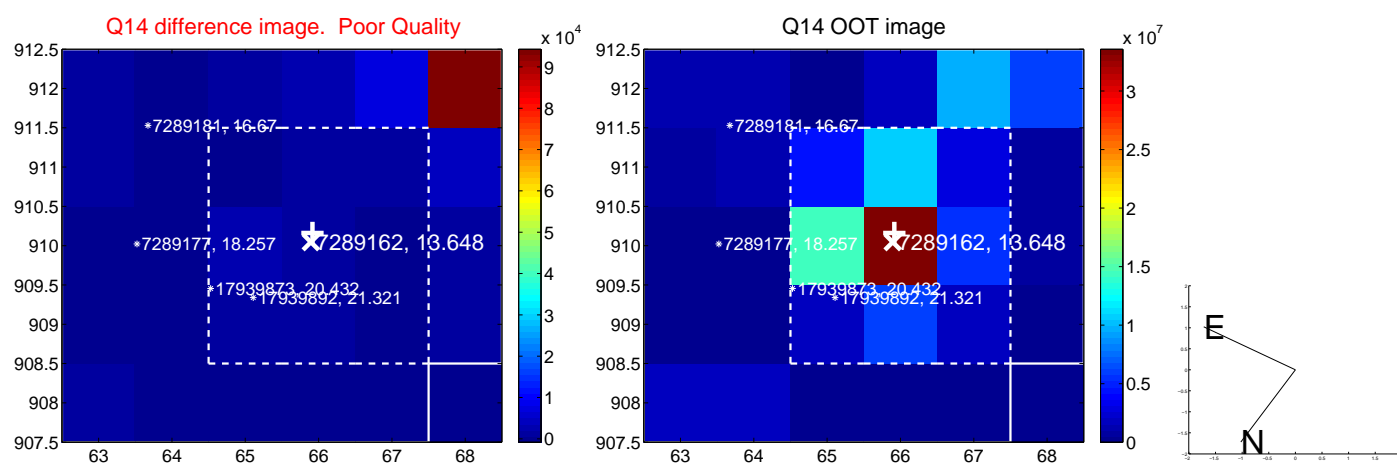
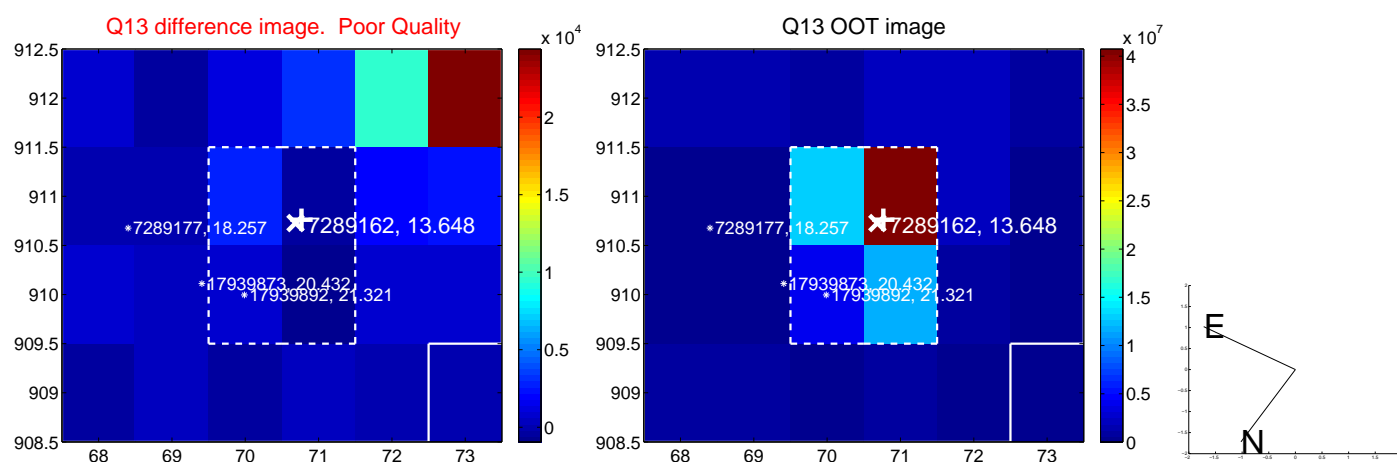
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



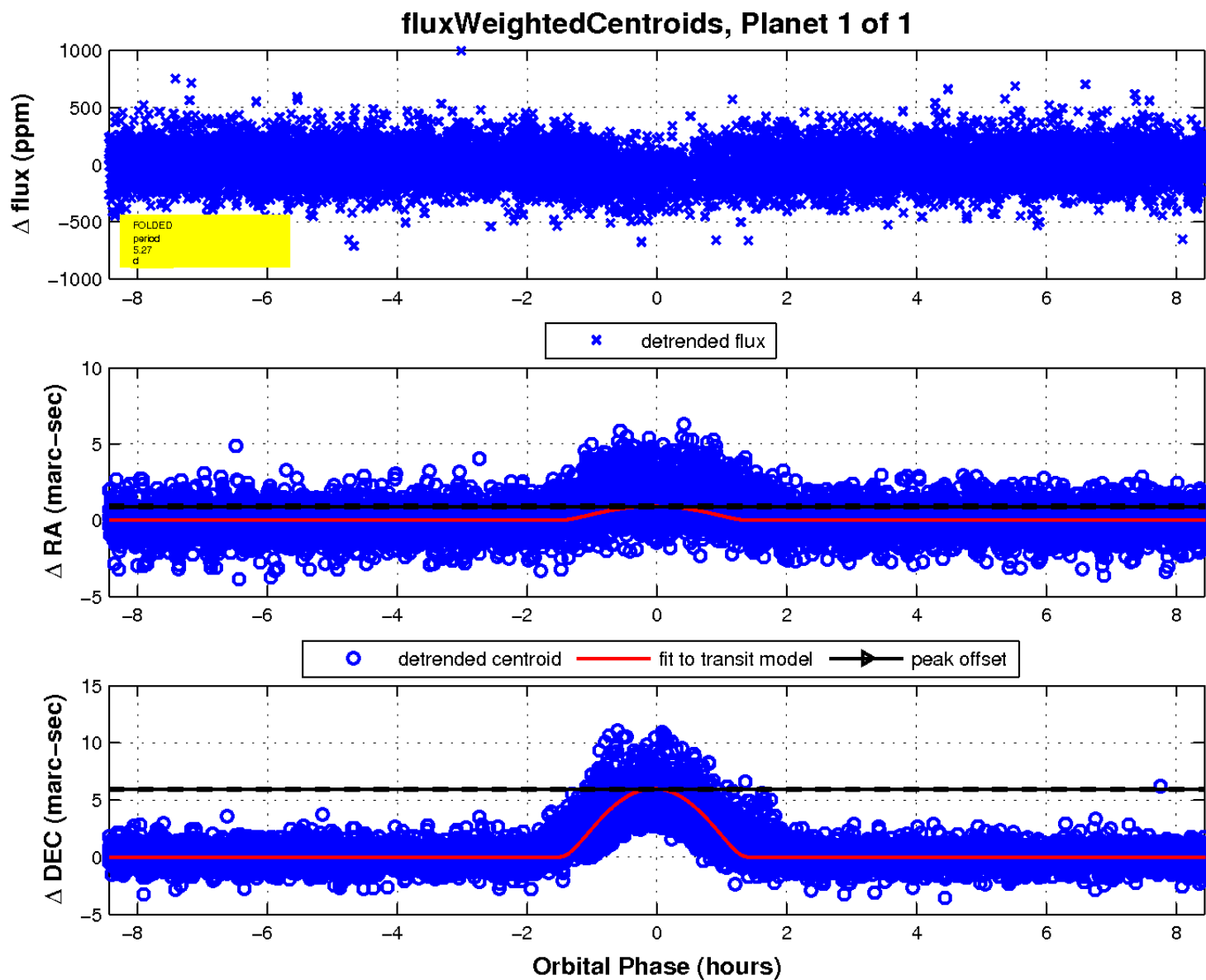
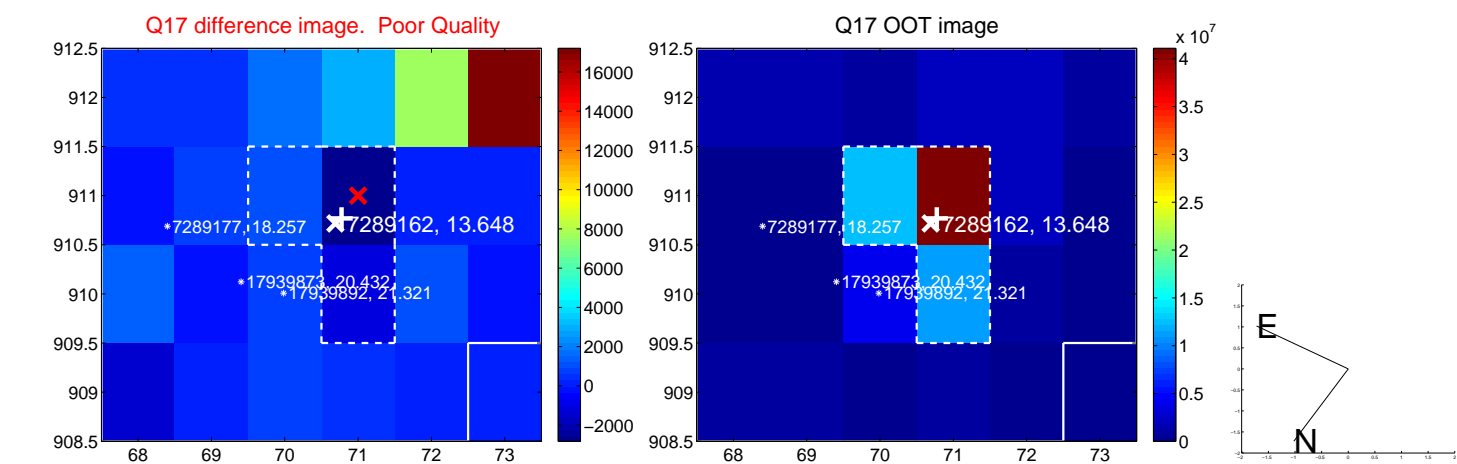
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

